Biol. Chem., Vol. 381, pp. 1277–1284, December 2000 · Copyright © by Walter de Gruyter · Berlin · New York

Contents
Biological Chemistry, Volume 381, 2000

Editorial

Hartl, F.-U.
Alexander J. Varshavsky – Felix Hoppe-Seyler Lecturer 2000 777

Guest Editorials

Hahlbrock, K.
Highlight: Plant Biological Chemistry 637

Wittinghofer, A. and P. Gierschik
Highlight: GTP Binding Proteins – Central Regulators in Cell Biology 355

Felix Hoppe-Seyler Lecture 2000

Varshavsky, A., G. Turner, F. Du and Y. Xie
The Ubiquitin System and the N-End Rule Pathway 779

Paper of the Year 1999 791

Reviews

Bode, J., T. Schlake, M. Iber, D. Schübeler, J. Seibler, E. Snezhkov and L. Nikolaev
The Transgeneticist's Toolbox: Novel Methods for the Targeted Modification of Eukaryotic Genomes 801

Huber, A.B. and M.E. Schwab
Nogo-A, a Potent Inhibitor of Neurite Outgrowth and Regeneration 407

Köhrle, J., R. Brigelius-Flohé, A. Böck, R. Gärtner, O. Meyer and L. Flohé
Selenium in Biology: Facts and Medical Perspectives 849

Lengeler, J.W.
Metabolic Networks: a Signal-Oriented Approach to Cellular Models 911

Lochnit, G., R.D. Dennis and R. Geyer
Phosphorylcholine Substituents in Nematodes: Structures, Occurrence and Biological Implications 839

Malumbres, M., S. Ortega and M. Barbacid
Genetic Analysis of Mammalian Cyclin-Dependent Kinases and Their Inhibitors 827

Mayer, M.P., S. Rüdiger and B. Bukau
Molecular Basis for Interactions of the DnaK Chaperone with Substrates 877

Meyer, O., L. Gremer, R. Ferner, M. Ferner, H. Dobbek, M. Gnida, W. Meyer-Klaucke and R. Huber
The Role of Se, Mo and Fe in the Structure and Function of Carbon Monoxide Dehydrogenase 865

Nishimoto, T.
Upstream and Downstream of Ran GTPase 397

Offermanns, S.
The Role of Heterotrimeric G Proteins in Platelet Activation 389

Reumann, S.
The Structural Properties of Plant Peroxisomes and Their Metabolic Significance 639

Rodnina, M.V., H. Stark, A. Savelsbergh, H.-J. Wieden, D. Mohr, N.B. Matassova, F. Peske, T. Daviter, C.O. Gualerzi and W. Wintermeyer
GTPase Mechanisms and Functions of Translation Factors on the Ribosome 377

Sahm, H., L. Eggeling and A.A. de Graaf
Pathway Analysis and Metabolic Egineering in *Corynebacterium glutamicum* 899

Schaerer-Brodbeck, C. and H. Riezman
Interdependence of Filamentous Actin and Microtubules for Asymmetric Cell Division 815

Sprinzl, M., S. Brock, Y. Huang, P. Milovnik, M. Nanninga, M. Nesper-Brock, H. Rütthard and K. Szkaradkiewicz
Regulation of GTPases in the Bacterial Translation Machinery 367

Vothknecht, U.C. and J. Soll
Protein Import: the Hitchhikers Guide into Chloroplasts 887

Wilson, K.F. and R.A. Cerione
Signal Transduction and Post-Transcriptional Gene Expression 357

Whitmore, D., N. Cermakian, C. Crosio, N.S. Foulkes, M.P. Pando, Z. Travnickova and P. Sassone-Corsi
A Clockwork Organ 793

van Helden, J., A. Naim, R. Mancuso, M. Eldridge, L. Wernisch, D. Gilbert and S.J. Wodak
Representing and Analysing Molecular and Cellular Function Using the Computer 921

Minireviews

Aktories, K. G., Schmidt and I. Just
Rho GTPases as Targets of Bacterial Protein Toxins 421

Blundell, T.L., D.F. Burke, D. Chirgadze, V. Dhanaraj, M. Hyvönen, C.A. Innis, E. Parisini, L. Pellegrini, M. Sayed and B.L. Sibanda
Protein-Protein Interactions in Receptor Activation and Intracellular Signalling 955

Bruggeman, F.J., W.C. van Heeswijk, F.C. Boogerd and H.V. Westerhoff
Macromolecular Intelligence in Microorganisms ... 965

Leberer, E., D. Dignard, D.Y. Thomas and T. Leeuw
A Conserved G_{β} Binding (GBB) Sequence Motif in Ste20p/PAK Family Protein Kinases 427

Reichardt, H.M., F. Tronche, A. Bauer and G. Schütz
Molecular Genetic Analysis of Glucocorticoid Signaling Using the Cre/loxP System 961

Robinson, C.
The Twin-Arginine Translocation System: A Novel Means of Transporting Folded Proteins in Chloroplasts and Bacteria 89

Sandermann jr., H.
Active Oxygen Species as Mediators of Plant Immunity: Three Case Studies 649

Strub, A., J.H. Lim, N. Pfanner and W. Voos
The Mitochondrial Protein Import Motor 943

van Pée, K.-H., S. Keller, T. Wage, I. Wynands, H. Schnerr and S. Zehner
Enzymatic Halogenation Catalyzed *via* a Catalytical Triad and by Oxidoreductases 1

Wanker, E.E.
Protein Aggregation and Pathogenesis of Huntington's Disease: Mechanisms and Correlations 937

Zachau, H.G.
The Immunoglobulin κ Gene Families of Human and Mouse: a Cottage Industry Approach 951

Research Articles

Abramić, M., D. Schleuder, L. Dolovčak, W. Schröder, K. Strupat, D. Šagi, J. Peter-Katalinić and L. Vitale
Human and Rat Dipeptidyl Peptidase III: Biochemical and Mass Spectrometric Arguments for Similarities and Differences 1233

Albert, Š. and D. Gallwitz
Msb4p, a Protein Involved in Cdc42p-Dependent Organization of the Actin Cytoskeleton, Is a Ypt/Rab-Specific GAP 453

Amerik, A.Y., S.-J. Li and M. Hochstrasser
Analysis of the Deubiquitinating Enzymes of the Yeast *Saccharomyces cerevisiae* 981

Bachmeier, B.E., P. Boukamp, R. Lichtinghagen, N.E. Fusenig and E. Fink
Matrix Metalloproteinases-2, -3, -7, -9 and -10, But Not MMP-11, Are Differentially Expressed in Normal, Benign Tumorigenic and Malignant Human Keratinocyte Cell Lines 497

Bachmeier, B.E., A.G. Nerlich, P. Boukamp, R. Lichtinghagen, H. Tschesche, H. Fritz and E. Fink
Human Keratinocyte Cell Lines Differ in the Expression of the Collagenolytic Matrix Metalloproteinases-1, -8, and -13 and of TIMP-1 509

Barillas, W. and L. Beerhues
3-Hydroxybenzoate:Coenzyme A Ligase from Cell Cultures of *Centaurium erythraea*: Isolation and Characterization 155

Beyer, A., A. Kitzerow, B. Crute, B.E. Kemp, L.A. Witters and L.M.G. Heilmeyer jr.
Muscle Phosphorylase Kinase Is Not a Substrate of AMP-Activated Protein Kinase 457

Borowski, P., K. Resch, H. Schmitz and M. Heiland
A Synthetic Peptide Derived from the Non-Structural Protein 3 of Hepatitis C Virus Serves as a Specific Substrate for PKC 19

Buchczyk, D.P., K. Briviba, F.U. Hartl and H. Sies
Responses to Peroxynitrite in Yeast: Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) as a Sensitive Intracellular Target for Nitration and Enhancement of Chaperone Expression and Ubiquitination 121

Chillarón, J., C. Adán and I.G. Haas
Mannosidase Action, Independent of Glucose Trimming, Is Essential for Proteasome-Mediated Degradation of Unassembled Glycosylated Ig Light Chains 1155

Eckermann, C., J. Eichel and J. Schröder
Plant Methionine Synthase: New Insights into Properties and Expression 695

Eickhoff, B., S. Rüller, T. Laue, G. Köhler, C. Stahl, M. Schlaak and J. van der Bosch
Trichostatin A Modulates Expression of $p21^{waf1/cip1}$, Bcl-xL, ID1, ID2, ID3, CRAB3, GATA-2, hsp86 and TFIID/TAFII31 mRNA in Human Lung Adenocarcinoma Cells 107

Erba, F., L. Fiorucci, C.P. Sommerhoff, M. Coletta and F. Ascoli
Kinetic and Thermodynamic Analysis of Leech-Derived Tryptase Inhibitor Interaction with Bovine Tryptase and Bovine Trypsin 1117

Estébanez-Perpiñá, E., P. Fuentes-Prior, D. Belorgey, M. Braun, R. Kiefersauer, K. Maskos, R. Huber, H. Rubin and W. Bode
Crystal Structure of the Caspase Activator Human Granzyme B, a Proteinase Highly Specific for an Asp-P1 Residue 1203

Etscheid, M., A. Hunfeld, H. König, R. Seitz and J. Dodt
Activation of proPHBSP, the Zymogen of a Plasma Hyaluronan Binding Serine Protease, by an Intermolecular Autocatalytic Mechanism 1223

Evenäs, P., B. Dahlbäck and P.G. de Frutos
The First Laminin G-Type Domain in the SHBG-Like Region of Protein S Contains Residues Essential for Activation of the Receptor Tyrosine Kinase Sky ... 199

Faussner, A. and A.A. Roscher
Guanosine Nucleotides Regulate B2 Kinin Receptor Affinity of Agonists But Not of Antagonists: Discussion of a Model Proposing Receptor Precoupling to G Protein 295

Fenoll, L.G., J.N. Rodríguez-López, R. Varón, P.A. García-Ruiz, F. García-Cánovas and J. Tudela
Action Mechanism of Tyrosinase on *meta*- and *para*-Hydroxylated Monophenols 313

Flicker, S., S. Laffer, P. Steinberger, B. Alhani, Y. Zhu, M.-L. Laukkanen, K. Keinänen, D. Kraft and R. Valenta
Engineering, Purification and Applications of His-Tagged Recombinant Antibody Fragments with Specificity for the Major Birch Pollen Allergen, Bet v 1 39

Ganoza, M.C. and H. Aoki
Peptide Bond Synthesis: Function of the *efp* Gene Product 553

Gehrhardt, S., E. Blume, G.A. Cumme, R. Bublitz, H. Rhode and A. Horn
Gel Chromatographic Characterization of the Hydrophobic Interaction of Glycosylphosphatidyl-inositol-Alkaline Phosphatase with Detergents 161

Geigenberger, P., A.R. Fernie, Y. Gibon, M. Christ and M. Stitt
Metabolic Activity Decreases as an Adaptive Response to Low Internal Oxygen in Growing Potato Tubers 723

Genschel, J., U. Curth and C. Urbanke
Interaction of *E. coli* Single-Stranded DNA Binding Protein (SSB) with Exonuclease I. The Carboxy-Terminus of SSB Is the Recognition Site for the Nuclease 183

Grazi, E., O. Cintio, E. Magri and G. Trombetta
Anomalous Binding of MgADP to Myosin of Skeletal Muscle 35

Greenbaum, L., C. Rothmann, R. Lavie and Z. Malik
Green Fluorescent Protein Photobleaching: A Model for Protein Damage by Endogenous and Exogenous Singlet Oxygen 1251

Haider, G., T. von Schrader, M. Füßlein, S. Blechert and T.M. Kutchan
Structure-Activity Relationships of Synthetic Analogs of Jasmonic Acid and Coronatine on Induction of Benzo[c]phenanthridine Alkaloid Accumulation in *Eschscholzia californica* Cell Cultures 741

Hoenger, A., M. Doerhoefer, G. Woehlke, P. Tittmann, H. Gross, Y.H. Song and E. Mandelkow
Surface Topography of Microtubule Walls Decorated with Monomeric and Dimeric Kinesin Constructs .. 1001

Holmberg, L. and O. Nygård
Release of Ribosome-Bound 5S rRNA upon Cleavage of the Phosphodiester Bond between Nucleotides A54 and A55 in 5S rRNA 1041

Hu, R.-g., S. Tang and W.-y. Liu
The pH-Dependent Intercation of Cinnamomin with Lipid Membranes Investigated by Fluorescence Methods 567

Ingr, M. and J. Konvalinka
Theoretical Description of the Direct Exponential Amplification and Sequencing (DEXAS) Method ... 439

Kaesler, S., B. Lüscher and U. Rüther
Transcriptional Activity of GLI1 Is Negatively Regulated by Protein Kinase A 545

Kardinahl, S., S. Anemüller and G. Schäfer
The Hyper-Thermostable Fe-Superoxide Dismutase from the Archaeon *Acidianus ambivalens*: Characterization, Recombinant Expression, Crystallization and Effects of Metal Exchange 1089

Katsani, K.R., P. Tsiboli, K. Anagnostopoulos, H. Urlaub and T. Choli-Papadopoulou
Identification of the 50S Ribosomal Proteins from the Eubacterium *Thermus thermophilus* 1079

Klein, M., I. Gestmann, U. Berndorfer, A. Schmitz and V. Herzog
The Thioredoxin Boxes of Thyroglobulin: Possible Implications for Intermolecular Disulfide Bond Formation in the Follicle Lumen 593

Knutson, A., P. Lillhager and G. Westin
Identification of a CpG Island in the Human LRP-2 Gene and Analysis of Its Methylation Status in Parathyroid Adenomas 433

Kolkenbrock, H., J. Zimmermann, G.-R. Burmester and N. Ulbrich
Activation of Progelatinase B by Membranes of Human Polymorphonuclear Granulocytes 49

Kopitar-Jerala, N., F. Gubenšek and V. Turk
Recombinant Anti-Stefin A Fab Fragment: Sequence Analysis of the Variable Region and Expression in *Escherichia coli* 1245

Krisch, R., K. Rakowski and R. Ratajczak
Processing of V-ATPase Subunit B of *Mesembryanthemum crystallinum* L. Is Mediated *in Vitro* by a Protease and/or Reactive Oxygen Species 583

Leverrier, S., E. Cinato, C. Paul, J. Derancourt, M. Bernark, T. Leanderson and C. Legraverend
Purification and Cloning of Type A/B hnRNP Proteins Involved in Transcriptional Activation from the Rat *spi* 2 Gene GAGA Box 1031

Lindner, H., W. Berens, I. Kraus and K.-H. Röhm
Mutational Analysis of Two PWW Sequence Motifs in Human Aminoacylase 1 1055

Löwe, J. and L.A. Amos
Helical Tubes of FtsZ from *Methanococcus jannaschii* 993

Luparello, C., F. Santamaria and T. Schilling
Regulation of PTHrP and PTH/PTHrP Receptor by Extracellular Ca^{2+} Concentration and Hormones in the Breast Cancer Cell Line 8701-BC 303

Malanga, M. and B. Farina
Noncovalent Binding of Poly(ADP-Ribose) to Nuclear Matrix Proteins: Developmental Changes and Tissue Specificity 1047

Meineke, P., U. Rauen, H. de Groot, H.-G. Korth and R. Sustmann
Nitric Oxide Detection and Visualization in Biological Systems. Application of the FNOCT Method 575

Miersch, O. and C. Wasternack
Octadecanoid and Jasmonate Signaling in Tomato (*Lycopersicon esculentum* Mill.) Leaves: Endogenous Jasmonates Do Not Induce Jasmonate Biosynthesis 715

Mithöfer, A., J. Fliegmann, G. Neuhaus-Url, H. Schwarz and J. Ebel
The Hepta-β-Glucoside Elicitor-Binding Proteins from Legumes Represent a Putative Receptor Family 705

Müller A. and E.W. Weiler
IAA-Synthase, an Enzyme Complex from *Arabidopsis thaliana* Catalyzing the Formation of Indole-3-Acetic Acid from (S)-Tryptophan 679

Mulcahy, M., J.G. McInerney, D.N. Nikogosyan and H. Görner
193 nm Photolysis of Aromatic and Aliphatic Dipeptides in Aqueous Solution: Dependence of Decomposition Quantum Yield on the Amino Acid Sequence 1259

Oda, K., H. Matsuda, T. Murakami, S. Katayama, T. Ohgitani and M. Yoshikawa
Adjuvant and Haemolytic Activities of 47 Saponins Derived from Medicinal and Food Plants 67

Orrù, S., A. Amoresano, R. Siciliano, R. Napoleoni, O. Finocchiaro, A. Datola, E. De Luca, A. Sirna and P. Pucci
Structural Analysis of Modified Forms of Recombinant IFN-β Produced under Stress-Simulating Conditions 7

Padma, A.S. and R.V. Thampan
Interdependence between a 55 kDa Protein (p55) and a 12 kDa Protein (p12) in Facilitating the Nuclear Entry of Goat Uterine Estrogen Receptor under Cell-Free Conditions 285

Plendl, J., C. Snyman, S. Naidoo, S. Sawant, R. Mahabeer and K.D. Bhoola
Expression of Tissue Kallikrein and Kinin Receptors in Angiogenic Microvascular Endothelial Cells 1103

Pohlentz, G. and B. Drees
Neoglycolipids Derived from Phosphatidyl-ethanolamine Serve as Probes in Cell Culture Studies on Glycolipid Metabolism 29

Ponath, Y., H. Vollberg, K. Hahlbrock and E. Kombrink
Two Differentially Regulated Class II Chitinases from Parsley 667

Rangarajan, M., M.A. Scragg and M.A. Curtis
Bait Region Cleavage and Complex Formation of Human α_2M with a *Porphyromonas gingivalis* W50 Protease Is Not Accompanied by Enzyme Inhibition 57

Reddy, J.T., K.L. Korth, S.V. Wesley, P.A. Howles, S. Rasmussen, C. Lamb and R.A. Dixon
Post-Transcriptional Regulation of Phenylalanine Ammonia-Lyase Expression in Tobacco Following Recovery from Gene Silencing 655

Rhode, H., M. Schulze, G.A. Cumme, A. Göhlert, E. Blume, R. Bublitz, K. Schilling and A. Horn
Glycosylphosphatidylinositol-Specific Phospho-lipase D of Human Serum - Activity Modulation by Naturally Occurring Amphiphiles 471

Rolli-Derkinderen, M. and M. Gaestel
p38/SAPK2-Dependent Gene Expression in Jurkat T Cells 193

Rondard, P. and H. Bedouelle
Mutational Scanning of a Hairpin Loop in the Tryptophan Synthase β-Subunit Implicated in Allostery and Substrate Channeling 1185

Salamon, D., M. Takacs, S. Myöhänen, Z. Marcsek, G. Berencsi and J. Minarovits
De Novo DNA Methylation at Nonrandom Founder Sites 5′ from an Unmethylated Minimal Origin of DNA Replication in Latent Epstein-Barr Virus Genomes 95

Schepers, U., T. Lemm, V. Herzog and K. Sandhoff
Characterization of Regulatory Elements in the 5′-Flanking Region of the GM2 Activator Gene 531

Schlattner, U., M. Eder, M. Dolder, Z.A. Khuchua, A.W. Strauss and T. Wallimann
Divergent Enzyme Kinetics and Structural Properties of the Two Human Mitochondrial Creatine Kinase Isoenzymes 1063

Schmitt, M., R. Kubitz, M. Wettstein, S. vom Dahl and D. Häussinger
Retrieval of the *mrp2* Gene Encoded Conjugate Export Pump from the Canalicular Membrane Contributes to Cholestasis Induced by *tert*-Butyl Hydroperoxide and Chloro-Dinitrobenzene 487

Schoenbohm, C., S. Martens, C. Eder, G. Forkmann and B. Weisshaar
Identification of the *Arabidopsis thaliana* Flavonoid 3′-Hydroxylase Gene and Functional Expression of the Encoded P450 Enzyme 749

Shneine, J., M. Voswinkel, M. Federwisch and A. Wollmer
Enhancing the T → R Transition of Insulin by Helix-Promoting Sequence Modifications at the N-Terminal B-Chain 127

Sondermann, H., T. Becker, M. Mayhew, F. Wieland and F.-U. Hartl
Characterization of a Receptor for Heat Shock Protein 70 on Macrophages and Monocytes 1165

Sperl, S., A. Bergner, J. Stürzebecher, V. Magdolen, W. Bode and L. Moroder
Urethanyl-3-Amidinophenylalanine Derivatives as Inhibitors of Factor Xa. X-Ray Crystal Structure of a Trypsin/Inhibitor Complex and Modeling Studies 321

Spiteller, D., K. Dettner and W. Boland
Gut Bacteria May Be Involved in Interactions between Plants, Herbivores and Their Predators: Microbial Biosynthesis of *N*-Acylglutamine Surfactants as Elicitors of Plant Volatiles 755

Steinborn, K., A. Szallies, D. Mecke and M. Duszenko
Cloning, Heterologous Expression and Kinetic Analysis of Glycerol Kinase (TbGLK1) from *Trypanosoma brucei* 1071

Steinert, P., K. Plank-Schumacher, M. Montemartini, H.-J. Hecht and L. Flohé
Permutation of the Active Site Motif of Tryparedoxin 2 211

Steinmetzer, T., M. Batdordshjin, F. Pineda, L. Seyfarth, A. Vogel, S. Reißmann, J. Hauptmann and J. Stürzebecher
New Bivalent Thrombin Inhibitors with N^{ω}(Methyl)Arginine at the P1 Position 603

Stock, A. and H. Sies
Thyroid Hormone Receptors Bind to an Element in the Connexin43 Promoter 973

Sveshnikova, N., R. Grimm, J. Soll and E. Schleiff
Topology Studies of the Chloroplast Protein Import Channel Toc75 687

Tzschoppe, K., S.D. Kohlwein and G. Rödel
Yeast Translational Activator Cbs2p: Mitochondrial Targeting and Effect of Overexpression 1175

Valueva, T.A., T.A. Revina, V.V. Mosolov and R. Mentele
Primary Structure of Potato Kunitz-Type Serine Proteinase Inhibitor 1215

Wahl, M.C., R. Huber, S. Marinkoviç, E. Weyher-Stingl and S. Ehlert
Structural Investigations of the Highly Flexible Recombinant Ribosomal Protein L12 from *Thermotoga maritima* 221

Wasner, H.K., M. Gebel, S. Hucken, M. Schaefer and M. Kincses
Two Different Mechanisms for Activation of Cyclic PIP Synthase: by a G Protein or by Protein Tyrosine Phosphorylation 145

Wei, Q. and L. Yan
Effect of Vanadyl Ions on Calcineurin and Its A Subunit 309

Weisz, K., D. Leitner, C. Krafft and H. Welfle
Structural Heterogeneity in Intramolecular DNA Triple Helices 275

Wiese, A., T. Wieder, M. Mickeleit, S. Reinöhl, C.C. Geilen, U. Seydel and W. Reutter
Structure-Dependent Effects of Glucose-Containing Analogs of Platelet Activating Factor (PAF) on Membrane Integrity 135

Winklhofer, K.F. and J. Tatzelt
Cationic Lipopolyamines Induce Degradation of PrP^{Sc} in Scrapie-Infected Mouse Neuroblastoma Cells .. 463

Wizemann, H., F. Weiland, E. Pfaff and A. von Brunn
Polyhistidine-Tagged Hepatitis B Core Particles as Carriers of HIV-1/gp120 Epitopes of Different HIV-1 Subtypes 231

Xu, Y.-Z. and W.-Y Liu
Effects of the Active Aldehyde Group Generated by RNA N-Glycosidase in the Sarcin/Ricin Domain of Rat 28S Ribosomal RNA on Peptide Elongation ... 113

Xu, Y.-Z., Y.-J. Li, H.-Y. Hu, R.-g. Hu, H. Wu and W.-Y. Liu
Adenine Nucleotide *N*-Glycosidase Activity of the A-Chain of Cinnamomin Characterized by ^{1}H-Nuclear Magnetic Resonance 447

Yamada, M., J. Nagatomo, Y. Setoguchi, N. Kuroki, S. Higashi and T. Setoguchi
Circadian Rhythms of Sterol 12α-Hydroxylase, Cholesterol 7α-Hydroxylase and DBP Involved in Rat Cholesterol Catabolism 1149

Zhang, F.-w., F.-k. Zhao and G.-j. Xu
Molecular Cloning, Expression and Purification of Muscle Fructose-1,6-Bisphosphatase from *Zaocys dhumnades*: the Role of the N-Terminal Sequence in AMP Activation at Alkaline pH 561

Zhu, Z.Y., O. Minenkova, F. Bellintani, A. De Tomassi, L. Urbanelli, F. Felici and P. Monaci
'*In Vitro* Evolution' of Ligands for HCV-Specific Serum Antibodies 245

Zhu, Z., S. Ling, Q.-H. Yang and L. Li
The Difference in the Carboxyl-Terminal Sequence Is Responsible for the Difference in the Activity of Chicken and Rat Liver Fructose-2,6-Bisphosphatase 1195

Zieger, M., W. Oehrl, R. Wetzker, P. Henklein, G. Nowak and R. Kaufmann
Different Signaling Pathways Are Involved in CCK_B Receptor-Mediated MAP Kinase Activation in COS-7 Cells 763

Short Communications

Aronsson, H., K. Sohrt and J. Soll
NADPH:Protochlorophyllide Oxidoreductase Uses the General Import Route into Chloroplasts 1263

Arteel, G.E., S. Franken, J. Kappler and H. Sies
Binding of Selenoprotein P to Heparin: Characterization with Surface Plasmon Resonance 265

Ascenzi, P., M. Colasanti, T. Persichini, M. Muolo, F. Polticelli, G. Venturini, D. Bordo and M. Bolognesi
Re-Evaluation of Amino Acid Sequence and Structural Consensus Rules for Cysteine-Nitric Oxide Reactivity 623

Bourin, P., A. Servat, J.-J. Lataillade, M. Goyffon, D. Vaux and P. Billiald
Immunolabeling of CD3-Positive Lymphocytes with a Recombinant Single-Chain Antibody/Alkaline Phosphatase Conjugate 173

Burda, M.R., I. Hindennach and S. Miller
Stability of Bacteriophage T4 Short Tail Fiber 255

Carvalho, C.R.O., L. Maeda, S.L. Brenelli and M.J.A. Saad
Tissue-Specific Regulation of IRS-2/PI 3-Kinase Association in Aged Rats 75

Eickhoff, B., L. Germeroth, C. Stahl, G. Köhler, S. Rüller, M. Schlaak and J. van der Bosch
Trichostatin A-Mediated Regulation of Gene Expression and Protein Kinase Activities: Reprogramming Tumor Cells for Ribotoxic Stress-Induced Apoptosis 1127

Galeša, K., B. Štrukelj, S. Bavec, V. Turk and B. Lenarčič
Cloning and Expression of Functional Equistatin .. 85

Gilch, S., C. Spielhaupter and H.M. Schätzl
Shortest Known Prion Protein Allele in Highly BSE-Susceptible Lemurs 521

Gypakis, A. and H.K. Wasner
Phosphatidylinositol 3-Kinase and Prostaglandyl-inositol Cyclic Phosphate (Cyclic PIP), a Mediator of Insulin Action, in the Signal Transduction of Insulin 1139

Haensler, M. and K. Arnold
Investigation of the Effect of Freezing in Protease-Catalyzed Peptide Synthesis Using Cryoprotectants and Frozen Organic Solvent 79

Kato, T., T. Imatani, T. Miura, K. Minaguchi, E. Saitoh and K. Okuda
Cytokine-Inducing Activity of Family 2 Cystatins .. 1143

Kim, Y.S. and S. Han
Superoxide Reactivates Nitric Oxide-Inhibited Catalase 1269

Korn, K., H.-H. Foerster and U. Hahn
Phage Display of RNase A and an Improved Method for Purification of Phages Displaying RNases 179

Korn, K., S. Wennmalm, H.-H. Foerster, U. Hahn and R. Rigler
Analysis of the RNase T1 Mediated Cleavage of an Immobilized Gapped Heteroduplex *via* Fluorescence Correlation Spectroscopy 259

Kuckelkorn, U., C. Knuehl, B. Boes-Fabian, I. Drung and P.-M. Kloetzel
The Effect of Heat Shock on 20S/26S Proteasomes 1017

Lim, A., C. Boon and T. Dick
Inducibility of the *Streptomyces traR*^{ts107}-P*tra* Expression Cassette in *Mycobacterium smegmatis* 517

Longshaw, V.M., H.W. Dirr, G.L. Blatch and M. Lässle
The *in Vitro* Phosphorylation of the Co-Chaperone mSTI1 by Cell Cycle Kinases Substantiates a Predicted Casein Kinase II-p34^{cdc2}-NLS (CcN) Motif 1133

Morgan, R.D., C. Calvet, M. Demeter, R. Agra and H. Kong
Characterization of the Specific DNA Nicking Activity of Restriction Endonuclease N.*Bst*NBI 1123

Müller, S., A. Adomeit, R. Kaufmann, H. Appelhans, H. Passow, S. Reißmann and C. Liebmann
Expression and Functional Characterization of a pHis-Tagged Human Bradykinin B_2 Receptor in COS-7 Cells 343

Muntau, A.C., P.U. Mayerhofer, S. Albet, T.E. Schmid, M. Bugaut, A.A. Roscher and S. Kammerer
Genomic Organization, Expression Analysis, and Chromosomal Localization of the Mouse *PEX3* Gene Encoding a Peroxisomal Assembly Protein 337

Murmann, O.V., F. Niggli and B.W. Schäfer
Cloning and Characterization of the Human PAX7 Promoter 331

Neuser, F., H. Zorn, U. Richter and R.G. Berger
Purification, Characterisation and cDNA Sequencing of Pyruvate Decarboxylase from *Zygosaccharomyces bisporus* 349

Podlich D. and M. Kemme
Expression of Human Tissue Kallikrein in Differentiated HL-60 Cells 629

Prinz, A., E. Hartmann and K.-U. Kalies
Sec61p Is the Main Ribosome Receptor in the Endoplasmic Reticulum of *Saccharomyces cerevisiae* 1025

Quesada, P., L. Atorino, A. Parente, F. Del Vecchio Blanco, A. Di Maro, G. Ciarcia and B. Farina
Characterization of SNP, a Novel Tissue- and Phase-Specific Nuclear Protein Expressed during the Proliferative Phase in the Oviduct of the Lizard *Podarcis sicula* Raf. 615

Roth, M., and A. Jeltsch
Biotin-Avidin Microplate Assay for the Quantitative Analysis of Enzymatic Methylation of DNA by DNA Methyltransferases 269

Sandu, C., P. Nick, D. Hess, E. Schiltz, T.A. Garrow and R. Brandsch
Association of Betaine-Homocysteine S-Methyltransferase with Microtubules 619

Steinbach, O.C., A.P. Wolffe and R.A.W. Rupp
Histone Deacetylase Activity Is Required for the Induction of the MyoD Muscle Cell Lineage in *Xenopus* 1013

Tang, S., R.-g. Hu, W.-y. Liu and K.-c. Ruan
Non-Specific Depurination Activity of Saporin-S6, a Ribosome-Inactivating Protein, under Acidic Conditions 769

Weber, S., H. Lemoine and H.K. Wasner
Prostaglandin Deficiency Promotes Sensitization of Adenylyl Cyclase 525

Weitzel, J. M., S. Grott, C. Radtke, S. Kutz and H.J. Seitz
Multiple Promoters Direct the Tissue-Specific Expression of Rat Mitochondrial Glycerol-3-Phosphate Dehydrogenase 611

Yoshida, K., Y. Suzuki, K. Yamamoto, K. Matsuura, M. Watanabe and H. Sinohara
Molecular Evolution in the Hypervariable Regions of Fetuin: Comparison between Human and African Green Monkey Fetuin 773

Erratum 1273

Acknowledgement 1275

Author Index 1285

Subject Index 1289